[redacted]

## 5 IMPACT ASSESSMENT APPROACH

***The impact of criteria pollutants were assessed with the revised emission rates. Changes to the original impact assessment are detailed below. Other analyses (i.e. HAPs, Regional Haze, etc.) were not affected by the revision and have not been repeated.***

### 5.1 AIR QUALITY MODELING

***The criteria pollutants $PM_{10}$, CO, $SO_2$ and $NO_X$ were reassessed using the revised emission rates. Emissions were modeled to determine compliance with NAAQS and PSD increment, as applicable. The analyses were conducted utilizing ISC3, as in the original permit application submittal.***

### 5.2 METEOROLOGICAL DATA

As in the original submittal, five years of representative off-site meteorological data (1987 through 1991) was used in this analysis. Surface data was from Rock Springs, Wyoming and upper air data from Lander, Wyoming. This data was processed using the EPA's PCRAMMET program. This program is used to generate stability classes from the surface and upper air data and to interpolate the twice daily mixing heights for each hour.

[redacted]

## 5.3 SOURCE CHARACTERISTICS

### 5.3.1 Stack Parameters

The stack parameters of the expansion sources with revisions are presented in Table 5-5: Stack Parameters of Expansion Sources. Also included are three existing sources, AQD #s 30, 31, and 44 which have minor corrections. The revised/corrected parameters are denoted in bold italics. For the stack parameters of all other, unchanged sources, see Table 5-5 in the original permit application submittal, AP-W77.

The emission rates of the revised expansion sources are presented in Table 5-6: Revised Emission Rates of Expansion Sources (PPH). Also included are existing sources which have revised emission rates. All revised rates are denoted in ***bold italics***. For the emission rates of all other, unchanged sources, see Table 5-6 in the original permit application submittal, AP-W77.

**Table 5-5: Stack Parameters (*Revisions/Corrections*)**

| AQD # | Name | Location (UTM) | | Stack Height | | Diameter | Temp | Velocity |
|---|---|---|---|---|---|---|---|---|
| | | East | North | feet | meters | meters | K | m/s |
| | **Existing Sources** | **Corrections** | | | | | | |
| 30 | Lime Bin #1 | 603938.5 | 4594768.1 | 88 | 26.82 | 0.20 | ***293.2*** | 17.98 |
| 31 | Lime Bin #2 | 603938.5 | 4594746.7 | 88 | 26.82 | 0.20 | ***293.2*** | 17.98 |
| 44 | Lime Unloading | 603987.0 | 4594748.3 | ***63*** | ***19.20*** | ***0.30*** | ***293.2*** | ***17.07*** |
| | **Expansion Sources** | **Revisions** | | | | | | |
| 74 | North Headframe | ***Delete*** | | | | | | |
| 75 | Primary Crushing | ***Delete*** | | | | | | |
| 76 | ***Primary Crushing and Screening*** | 603502.7 | 4594970.8 | ***110*** | ***33.53*** | ***1.12*** | 288.7 | ***17.29*** |
| 77 | Transfer 101 | ***Delete*** | | | | | | |
| 78 | Transfer 102 | ***Delete*** | | | | | | |
| 79 | Transfer Point | 603588.0 | 4594954.0 | ***60*** | ***18.29*** | ***0.64*** | 288.7 | ***18.33*** |
| 80 | Calciner #4 | 603655.1 | 4594877.8 | 180 | 54.86 | ***3.20*** | ***424.9*** | ***15.55*** |
| 81 | Product Dryer Area | 603766.3 | 4594835.1 | 180 | 54.86 | ***0.51*** | ***394.3*** | ***23.38*** |
| 82 | Dryer #6 | 603781.6 | 4594832.1 | 180 | 54.86 | ***2.44*** | ***421.0*** | ***13.19*** |
| 83 | Silo Top | 603953.8 | 4594882.4 | 130 | 39.62 | ***0.51*** | 366.5 | ***17.53*** |
| 84 | Silo Bottom | ***Delete*** | | | | | | |

[redacted]

**Table 5-6: PPH Emission Rates (*Revised*)**

| AQD | Existing Sources | $PM_{10}$ | $NO_X$ | $SO_2$ | CO | VOC |
|---|---|---|---|---|---|---|
| *10* | ***Coal Crushing*** | ***0.30*** | | | | |
| *15* | ***Dryers 1 & 2*** | ***4.34*** | 1.20 | 0.06 | | |
| *18* | ***Boiler #1*** | ***5.0*** | 245 | 70 | 17.5 | 0.50 |
| *19* | ***Boiler #2*** | ***5.0*** | 245 | 70 | 17.5 | 0.50 |
| *26* | ***AT Dryer*** | ***0.55*** | 0.05 | | 0.07 | |
| *44* | ***Lime Unloading*** | ***0.18*** | | | | |
| *47* | ***Crusher*** | ***Delete*** | | | | |
| *50* | ***Dryer Area*** | ***0.70*** | | | | |
| *51* | ***Dryer #5*** | ***2.4*** | 18 | | 2.40 | 0.28 |
| *53* | ***Silo Bottom #2*** | ***0.45*** | | | | |
| *64* | ***Sulfite Blending #2*** | ***0.08*** | | | | |
| *65* | ***Sulfite Blending #1*** | ***0.03*** | | | | |
| *73* | ***MBS Dryer*** | ***0.90*** | 015 | 0.77 | | |
| | **Expansion Sources** | | | | | |
| 74 | North Headframe | ***Delete*** | | | | |
| 75 | Primary Crushing | ***Delete*** | | | | |
| 76 | Primary Screening | ***2.45*** | | | | |
| 77 | Transfer BH 101 | ***Delete*** | | | | |
| 78 | Transfer BH 102 | ***Delete*** | | | | |
| 79 | Transfer Point | ***0.84*** | | | | |
| 80 | Calciner #4 ESP | ***12.25*** | 20.0 | 0.0 | 1047.75 | 533.5 |
| 81 | Product Dryer Area BH | ***0.50*** | | | | |
| 82 | Dryer #6 ESP | ***3.45*** | 30.0 | 0.0 | 14.0 | 0.27 |
| 83 | Silo Top | ***0.41*** | | | | |
| 84 | Silo Bottom | ***Delete*** | | | | |

Four existing sources will be put on a 12 hour per day operating schedule. These sources, AQD #s 10, 11, 14, and 44 will operate only between the hours of 6:00 AM and 6:00 PM daily.